Poland—time to move on!

Authors' reply We appreciate the interest generated by our recent stroke thrombectomy clinical vignette.[1] A clinical vignette, opposite to an isolated case report, illustrates the fate of not one but hundreds of acute ischemic stroke (AIS) patients who continue to join (with all consequences) the severe disability lists because of a failed delivery of mechanical thrombectomy (MT), which is today not an "additional" treatment but the guideline-mandated, class of recommendation 1A, level of evidence 1 management.[2]

Messages highlighted by international key opinion leaders from 5 countries / 3 continents (including neuroradiology and neurosurgery) and by everyday MT operators (including cardiology) are consistent and unsurprising: 1) time is the fundamental principle in AIS—patients revascularized in 2 hours or less from stroke onset achieve approximately 90% good recovery whose likelihood, however, declines very significantly with time; thus, any avoidable transportation for MT harms severely; 2) with sparsely located comprehensive stroke centers (CSCs) and far too few operators, no neuroradiology-based system can effectively address the magnitude of the needs; 3) Poland's MT deliverability is amongst the world's lowest; 4) stroke international guidelines are clear on what and how should be done, and this is paralleled by working examples from different healthcare systems.

In Poland, a country of approximately 38 million residents, only 1111 MTs occurred between January and November 2019 (National Health Fund data; Stroke MT Program),[1] reaching a delivery level of less than 20% to 25%. With 60 000 strokes, Polish AIS patients require a minimum of 6000 to 8000 (and up to some 20 000) MTs per year. Thus, today, for every 5 patients with large-vessel occlusion AIS, less than 1 receives MT. For those supposedly fortunate to receive MT, many receive it too late for a full clinical recovery or a meaningful reduction of disability. Poland, once an international model of the heart attack care, is now amongst the 3 European leaders in the systemic *failure* of MT delivery for level of evidence 1A stroke clinical scenarios.[3] According to a large international survey, today it is better to be an average AIS patient in India (where the majority is not insured) than an average stroke patient in Poland.[3] If there "are" any true yet "different" data, those must be openly provided.

Reasons for failed MT deliveries are more than one,[1] but Poland's far-too-small number of MT centers and poor access to MT on a real (rather than theoretical) 24/7/365 basis is the number 1 reason communicated to the world by Poland's neurology and CSC MT leaders.[4]

Local multispecialty teams work well, joint in their common service to their community, unless[5] and until[1] disrupted by external politics focused on falsely perceived territorial protection rather than serving the needs of the patients. In AIS, territorial "protection"[5] might be regarded excusable *only* if the ones considering themselves the "owners" of the territory were able to deliver what in the contemporary world is a must-do.[2] "Protection" of a territory ("domain") at the cost of increased numbers of invalids (number needed to treat [NNT], 2.6) and dead bodies (NNT, 31) is not acceptable.[5] Contrary to the Ministry of Health regulations[1] endorsed by the Polish neurology leaders, subsequent stroke management

guidelines from the Polish Neurological Society state that "MT should be the domain of specialists in radiology, neurology or neurosurgery" (whose shortage translates into a greatly unmet need)[4] and step back (contrary to the Polish regulations,[1] international guidelines,[2] and stroke thrombectomy trials' common practice) to the "on-site neurosurgery requirement" as a practical means to block creation of thrombectomy-capable centers. It is regrettable that our local neurology colleagues[1] were pressed by the manuscript reviewer to remove their names from the publication.[1] The problem of the patients, similarly untreated before and after the one described in the vignette[1] or systematically treated too late to achieve optimal outcomes because of insisting on avoidable transportation, remains. Local stroke neurologists will hopefully continue their work in the multispecialty Task Force[1] established to make MT available routinely to *their* patients, in *their* high-volume hospital.

Stroke is not a primary disease of the neuron but a *vascular* problem of the arteries that supply the brain. We call upon the stroke management stakeholders in Poland to come to one table (as we did when defining, under the auspices of the Ministry of Health, common requirements for MT operators),[1] and set up—with the map of Poland on the wall—an improvement process to provide a real rather than theoretical access to MT. With the magnitude of the misery, time is high today to replace those seemingly clever "yes-(but of course no)s" and glimpses in the eyes—with a sparkle for action. It is 100% clear that neither 17 nor 25 CSCs would ever be able to provide an operational (rather than theoretical) stroke MT service to a country of 38 million people. An occasional helicopter (rather than road) transport of a VIP solves neither the stroke problem of the VIP (considerable neuronal loss with avoidable transportation from a thrombectomy-capable center to a CSC and logistics, resulting in an increased stroke size) nor that of other patients who could (and should) be treated on-site rather than late or not at all.

Ill politics may slow down, but it shall not stop, the progress of medicine.[5] Cardiac catheterization laboratory–based thrombectomy-capable centers, as defined by stroke physicians[2] (termed "level 2" MT centers in neuroradiology guidelines), are a fact in the world. In many countries, including Poland's neighbors, they deliver MT and the results not different from those in leading neuroradiology centers. Poland has presently ZERO of those.

How many more—avoidable—stroke victims and—avoidable—severe disabilities, including our work colleagues, public figures, or the decision-makers' family members, are needed before the MT system in Poland gets fixed?

ARTICLE INFORMATION

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